

Attorney Docket No.: DRE-0063
Inventors: Basude et al.
Serial No.: 09/980,134
Filing Date: July 2, 2002
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REMARKS

Claims 1-14 are pending in the instant application. Claims 1-14 have been rejected. Claims 1 and 10 have been amended. No new matter is added by this amendment. Reconsideration is respectfully requested in light of these amendments and the following remarks.

Rejection of Claims under 35 U.S.C. § 102(b) and 35 U.S.C. § 103

The rejection of claims 1-7 and 10-14 under 35 U.S.C. § 102(b) as being anticipated by Rasor (U.S. Patent 5,141,738) has been maintained.

The rejection of claims 1-7 and 9-14 under 35 U.S.C. § 102(b) as being anticipated by Schneider (U.S. Patent 5,271,928) has also been maintained.

In addition, the rejection of claim 8 as being unpatentable over Rasor (5,141,738) or Schneider (5,271,928) in view of Unger (U.S. Patent 5,542,935) under 35 U.S.C. 103(a) has been maintained.

Arguments presented by Applicants in the previous response were not found persuasive. In particular, the Examiner states his position to be that "since a surfactant is often an integral part of a gas microbubble, as shown by both Rasor and Schneider, the term "microbubble" cannot be used to exclude surfactant." Thus, the Examiner suggests

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that the term "a gas microbubble formed by introducing a gas into . . . "does not exclude surfactant as asserted. The Examiner suggests that the amendment of the claims to include the phrase "without surfactant" is unclear as to whether surfactant is excluded from the microparticle or gas microbubble or just from the gas microbubble. Thus the Examiner suggests that the claims are not limited to exclusion of a surfactant in making the claimed microbubble. The Examiner also suggests that this assertion appears to contradict the definition of gas microbubble as known in the art. In addition, the Examiner suggests that this assertion appears to contradict the actual invention, which used a surfactant in the microparticles that stabilize the gas microbubbles.

Applicants respectfully traverse this rejection.

At the outset, Applicants respectfully disagree with the Examiner's suggestion that "the actual invention" uses "a surfactant in the microparticles that stabilize the gas microbubbles." Instead, clear from the comparative experiments described in the specification at page 11, lines 14-22, is that inclusion of surfactant dramatically decreased the backscattered enhancement as compared to surface stabilized microparticles of the present invention prepared without surfactant. Thus, the Examiner's suggestion

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that the invention uses surfactant in the microparticles is incorrect.

Applicants also respectfully disagree with the Examiner's suggestion that exclusion of a surfactant in making the claimed microbubble appears to contradict the definition of gas microbubble as known in the art. The Examiner's "definition" of gas microbubble requiring surfactant appears to be based upon the 1992 and 1993 teachings of Rasor and Schneider. Applicants acknowledge these teachings to require surfactant in production of their gas microbubbles. However, the art of making gas microbubbles has advanced significantly from 1992/1993 and there are multiple examples of gas microbubbles, some of which do not require surfactant. As evidence of this fact, Applicants are providing herewith a summary created June 13, 2005 of contrast agents and entitled Medical Imaging Technology available via the World Wide Web at strategis.gc.ca/epic/internet/inmitr-crtim.nsf/en/hm00292e.html#agents. In the description in section 2. at page 1 this summary states that microbubbles of gas are stabilized by a shell of biocompatible material such as protein, lipid or polymer. Nowhere in this description is a surfactant required. Further beginning at page 2 a number of contrast agent known as of October 2000 and their formulations are listed, only one of which contains surfactant. Thus, while

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the gas microbubbles of Rasor and Schneider require surfactant, clearly not all gas microbubbles require surfactant.

In an earnest effort to advance the prosecution of this case and address concerns raised by the Examiner regarding clarity of the phrase "without surfactant", Applicants have amended claims 1 and 10 to state a surface stabilized microbubble formed without surfactant and an ecogenic surface formed without surfactant, respectively.

As the cited prior art references neither teach nor suggest gas microbubbles or ecogenic surfaces formed without surfactant, the references can neither anticipate nor render obvious the instant claimed invention.

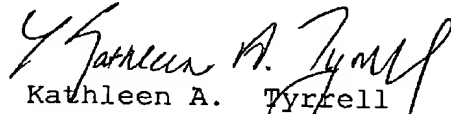
Withdrawal of all rejections under 35 U.S.C. 102 and 35 U.S.C. 103 is therefore respectfully requested.

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Conclusion

Applicants believe that the foregoing comprises a full and complete response to the Office Action of record. Accordingly, favorable reconsideration and subsequent allowance of the pending claims is earnestly solicited.

Respectfully submitted,


Kathleen A. Tyrrell
Registration No. 38,350

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Licata & Tyrrell P.C.
66 E. Main Street
Marlton, New Jersey 08053
(856) 810-1515